

What is claimed is:

1. An azeotrope composition comprised of: a first component comprised of at least one compound selected from the fluorocyclopentanes wherein a fluorine atom is substituted for from 1 to 9 hydrogen atoms; and a second component comprised of at least one compound selected from the group consisting of 1-bromopropane, t-dichloroethylene, and methylene chloride, wherein the amounts of each compound are selected so that the final composition is an azeotrope.
2. The composition of claim 1 wherein the fluorocyclopentane is selected from those containing from about 3 to 9 fluorine atoms and the second component is 1-bromopropane.
3. The composition of claim 2 wherein the fluorocyclopentane is 1,1,2,2,3,3,4-heptafluorocyclopentane.
4. The composition of claim 3 wherein the second component is 1-bromopropane.
5. The composition of claim 4 wherein there is also present at least one alcohol selected from the group consisting of methanol, ethanol, 1-propanol, and 2-propanol.
6. The composition of claim 1 wherein there is also present at least one alcohol selected from from the group consisting of methanol, ethanol, 1-propanol, and 2-propanol.
7. The composition of claim 1 wherein there is also provided another component selected from ethers, ketones, alkanes, alkenes, cycloalkanes, halogenated alkanes, and halogenated alkenes.
8. The composition of claim 1 comprised of about 20 to about 90 wt.% 1-bromopropane and from about 10 to about 80 wt.% 1,1,2,2,3,3,4-heptafluorocyclopentane wherein said composition boils from about 65°C to about 69°C at 760 mm Hg.
9. The composition of claim 8 comprised of about 40 to about 80 wt.% 1-bromopropane, from about 20 to about 60 wt.% 1,1,2,2,3,3,4-heptafluorocyclopentane wherein said composition boils from about 65°C to about 69°C at 760 mm Hg.

10. The compositions of claim 5 comprised of about 40 to about 80 wt.% 1-bromopropane, about 2 to about 42 wt.% 1,1,2,2,3,3,4-heptafluorocyclopentane, and from about 3 to about 37 wt.% methanol, and wherein said composition boils at about 53°C to about 57°C at 760 mm Hg.

11. The composition of claim 5 comprised of about 40 to about 80 wt.% 1-bromopropane, about 11 to about 41 wt.% 1,1,2,2,3,3,4-heptafluorocyclopentane, and from about 1 to about 30 wt.% ethanol, and wherein said compositions boils at about 59°C to about 63°C at 760 mm Hg.

12. The composition of claim 5 comprised of about 35 to about 75 wt.% 1-bromopropane, about 20 to about 60 wt.% 1,1,2,2,3,3,4-heptafluorocyclopentane, and from about 1 to about 24 wt.% 1-propanol, and wherein said composition boils at about 64°C to about 68°C at 760 mm Hg.

13. The composition of claim 5 comprised of about 35 to about 75 wt.% 1-bromopropane, about 15 to about 55 wt.% 1,1,2,2,3,3,4-heptafluorocyclopentane, and from about 1 to about 30 wt.% 2-propanol wherein said composition boils at about 63°C to about 67°C at 760 mm Hg.

14. The composition of claim 1 wherein there is also present and effective amount of one or more additives selected from the group consisting of acid acceptors, metal passivators, stabilizing agents, and surface-active agents, which effective amount is an amount that will maintain an azeotropic composition.

15. The composition of claim 10 wherein there is also present and effective amount of one or more additives selected from the group consisting of acid acceptors, metal passivators, stabilizing agents, and surface-active agents, which effective amount is an amount that will maintain an azeotropic composition.

16. A method for cleaning an organic contaminant from the surface of a solid substrate, which method comprises contacting said solid substrate at effective conditions with an effective amount of a solvent mixture comprised of a first component comprised of at least one compound selected from the fluorocyclopentanes wherein a fluorine atom is substituted for from 1 to 9 hydrogen atoms; and a second component comprised of at least one compound selected from the group consisting of 1-bromopropane, t-dichloroethylene, and methylene chloride, wherein the amounts of each compound are selected so that the final composition is an azeotrope.

17. The method of claim 16 wherein the fluorocyclopentane is selected from those containing from about 3 to 9 fluorine atoms and the second component is 1-bromopropane.

18. The method of claim 17 wherein the fluorocyclopentane is 1,1,2,2,3,3,4-heptafluorocyclopentane.

19. The method of claim 18 wherein the second component is 1-bromopropane.

20. The method of claim 19 wherein there is also present at least one alcohol selected from the group consisting of methanol, ethanol, 1-propanol, and 2-propanol.

21. The method of claim 16 wherein there is also present at least one alcohol selected from the group consisting of methanol, ethanol, 1-propanol, and 2-propanol.

22. The method of claim 16 wherein there is also provided another component selected from ethers, ketones, alkanes, alkenes, cycloalkanes, halogenated alkanes, and halogenated alkenes.

23. The method of claim 16 comprised of about 20 to about 90 wt.% 1-bromopropane and from about 10 to about 80 wt.% 1,1,2,2,3,3,4-heptafluorocyclopentane wherein said composition boils from about 65°C to about 69°C at 760 mm Hg.

24. The method of claim 23 comprised of about 40 to about 80 wt.% 1-bromopropane, from about 20 to about 60 wt.% 1,1,2,2,3,3,4-heptafluorocyclopentane wherein said composition boils from about 65°C to about 69°C at 760 mm Hg.

25. The method of claim 20 comprised of about 40 to about 80 wt.% 1-bromopropane,

about 2 to about 42 wt.% 1,1,2,2,3,3,4-heptafluorocyclopentane, and from about 3 to about 37 wt.% methanol, and wherein said composition boils at about 53°C to about 57°C at 760 mm Hg.

26. The method of claim 20 comprised of about 40 to about 80 wt.% 1-bromopropane, about 11 to about 41 wt.% 1,1,2,2,3,3,4-heptafluorocyclopentan, and from about 1 to about 30 wt.% ethanol, and wherein said compositions boils at about 59°C to about 63°C at 760 mm Hg.

27. The method of claim 20 comprised of about 35 to about 75 wt.% 1-bromopropane, about 20 to about 60 wt.% 1,1,2,2,3,3,4-heptafluorocyclopentane, and from about 1 to about 24 wt.% 1-propanol, and wherein said composition boils at about 64°C to about 68°C at 760 mm Hg.

28. The method of claim 20 comprised of about 35 to about 75 wt.% 1-bromopropane, about 15 to about 55 wt.% 1,1,2,2,3,3,4-heptafluorocyclopentane, and from about 1 to about 30 wt.% 2-propanol wherein said composition boils at about 63°C to about 67°C at 760 mm Hg.

29. The composition of claim 16 wherein there is also present and effective amount of one or more additives selected from the group consisting of acid acceptors, metal passivators, stabilizing agents, and surface-active agents, which effective amount is an amount that will maintain an azeotropic composition.

30. The composition of claim 25 wherein there is also present and effective amount of one or more additives selected from the group consisting of acid acceptors, metal passivators, stabilizing agents, and surface-active agents, which effective amount is an amount that will maintain an azeotropic composition.